



The Occurrence of *Pterostichus (Nialoe) truncatus* (Coleoptera: Carabidae) from Mt. Noaksan in the Vicinity of Sangju City, Korea

German Sh. Lafer, Jong Kyun Park^{1)*} and Jong Cheol Paik²⁾

Laboratory of Entomology, Institute of Biology and Pedology, Far East Branch, Russian Academy of Sciences, Vladivostok-22, 690022 Russia

¹⁾Department of Sericulture and Entomology Resources, Sangju National University, Sangju 742-71, Korea. E-mail: jgpark@sangju.ac.kr

²⁾Department of Agricultural Biology, Suncheon National University, Suncheon 540-742, Korea

Abstract The occurrence and newly described features, *Pterostichus (Nialoe) truncatus* Park et Kwon, 1996, was discussed and comprised with allied species by collection of Mt. Noaksan, vicinity of Sangju city, Korea.

Key words Taxonomy, Korean Fauna

A male of *Pterostichus (Nialoe) truncatus* Park et Kwon 1996 (Fig. 1) was obtained by the authors of this paper on August 26, 2001 near the Namjansa Temple in Mt. Noaksan which is located in the vicinity of Sangju City, GB, Korea. The topographic features of that area are stony, with dried stream along with pine-oak forests, and 200 m. alt.

P. truncatus, a rare species that was known hitherto by a small series including only three males (Park and Kwon, 1996), was collected at the remote localities from southern to central Korea such as: Mt. Kayasan (GN-GB), Mt. Sobaeksan (GB-CB) and in Kwangneung (GG, about 30 km NE from Seoul). The occurrence of this species at Mt. Noaksan situated at one of the branches of Sobaek mountains range between Mts. Kayasan and Sobaeksan is natural.

The abbreviation used in this paper are the same as Park et Kwon (1996).

Investigation of newly collected male gave us possibility to compare its features with previously published data, therefore, we could find out some new interesting characteristics, morphological characteristics of this species, and diagnostic features of the subgenus *Nialoe* Tanaka.

Standard measurements (in mm) are as follows: HL 2.55, HW 3.10, PA 3.10, PW 4.30, PB 3.00, PLt 3.85, PLm 3.50, EL 9.00, EW 5.80, L 17.30, Ls 15.40.

Most characteristics of this specimen living at Mt. Noaksan is fully corresponded with the original description of *P. truncatus* including the structures of male genitalia.

However, this specimen is slightly smaller sized than the holotype. The pronotum is comparatively more broad and more strongly narrowed towards base (PW/PB 1.43; 1.32 at holotype) than that of the holotype, and lateral sides of pronotum are strongly concaved and slightly diverged towards the tip of hind angles, and hind margin is slightly narrower than pronotal width of apex (PB/PA 0.97; 1.03 at holotype).

Hind half of pronotum at along the lateral margins and at basal foveae has numerous transverse wrinkles.

Head is sharply narrowed at the behind of tempora. Dorsal side of elytra is dull, and with

* To whom correspondence should be addressed.



Fig. 1. *Pterostichus (Nialoe) truncatus* ♂, from Mt. Noaksan, Sangju Korea.

three discal setiferous pores at interval 3 (in holotype also with three pores) which are situated symmetrically; anterior pair positioned at one-third from base adjoining in stria 3, median and posterior pairs situated at adjoining in stria 2 (median pair located at about the middle of elytra, posterior one located at about 3/4 from base). Sutural stria connected in front have its outer branch, with a basal setiferous pore in the base of that; its inner branch is well developed but isolated and scutellar striole formed at the interval 1. Prosternal intercoxal process is not margined at tip and along sides, but its median part has weak impression. Endophallus have very large arcuate sclerite in the tumour. At least, 1st-3rd segments of mid or hind tarsi have distinct medial furrow on dorsal surface, in addition to two furrows also showed on outer side of tarsi.

Among the species of the subgenus *Nialoe* Tanaka, the most similar species of *P. truncatus*, is *P. praedo* Tschitscherine; both species have a similar shape in structural type of last visible abdominal sternite, apex of that has no additional lobes but only curved down, slightly in *P. truncatus* (rounded-hind margin is visible in dorsal view) and strongly in *P. praedo* (hind margin is visible only from behind and in ventral view, but in dorsal view, it can watch only false <hind> margin such as two almost symmetrical lobes remaining of last sternite of *P. scurrus* Tschitscherine). In males of both species, elytra is dull in dorsal side, at that the outer branch of sutural stria is well developed.

However, the best differences in shape is aedeagal characteristics and also sympatrical distribution proves that *P. praedo* and *P. truncatus* are the different species from others (at least

at Kwangneung and at Mt. Kayasan).

A female of *P. truncatus* is not known hitherto and we cannot distinguish it from females of *P. praedo*. Possibly the most important characteristics for discrimination of females of *P. truncatus* will be the presence of distinct numerous transverse wrinkles along the pronotum at lateral margin and at basal foveae, and also will be the distinct median furrow on dorsal surface of mid and hind tarsi.

In the shape of body, *P. truncatus* is also similar to *P. jogaesanensis* but easily distinguished by the shape of last abdominal sternite and aedeagus of male, and dull of elytra, at that sutural stria connected have its outer branch (in *P. jogaesanensis*, the outer branch always reduced, sometimes absent), by having numerous transverse wrinkles along lateral sides and in basal foveae at pronotum and also having strong impressed median line, and by the presence of distinct median furrows on dorsal surface of mid and hind tarsi.

From *P. scurrus* Tschitscherine, apparently the most common species at the vicinity of Sangju, *P. truncatus* can be discriminated by sharply narrowed head in behind of tempora (in *P. scurrus*, head slightly narrowed in behind of tempora), dull of elytra in male (in males of *P. scurrus* elytra shiny), strongly remoted anterior pair of discal setiferous pores from elytral base, having median furrows on dorsal surface of mid and hind tarsi, and another shape of last abdominal sternite in male and structures of aedeagus.

From *P. audax* Tschitscherine, *P. truncatus* is distinguished by absence of transverse impression at 1st sternite of abdomen and discal setiferous pores at elytral interval 5.

According to our modern knowledge, at least the other species of subgenus *Nialoe* are distributed allopatrically with *P. truncatus*.

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